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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,478	01/09/2002	Jose Antonio Garcia Tello	TER99P3467	6081

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LERNER AND GREENBERG, P.A.
Post Office Box 2480
Hollywood, FL 33022-2480

EXAMINER	
PHAM, THOMAS K	

ART UNIT	PAPER NUMBER
2121	11

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PRG

Office Action Summary	Application No.	Applicant(s)	
	10/042,478	TELLO ET AL.	
	Examin r	Art Unit	
	Thomas K Pham	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Response to Amendment

1. This action is in response to request for re-consideration filed on 11/12/2003

2. Claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harmon et al. U.S. Patent 5,361,198 (hereinafter Harmon) in view of Eryurek et al. U.S. Patent No. 6,119,047 (hereinafter Eryurek) further in view of Lang U.S. Patent 5,745,539 and further in view of Boyce et al. U.S. Patent 5,392,879 (hereinafter Boyce).

Regarding claim 1

Harmon discloses a module for controlling a drive, the module comprising: a terminal for connecting to a control system for operating tasks and a control system for safety tasks, commands from the control system for safety tasks having priority over commands from the control system for operating tasks (col. 11 line 64 to col. 12 line 3, "It can be ... workstation 104") but does not disclose a microprocessor for processing commands from multiple controlling and diagnostic devices, said microprocessor coupled to said terminal; a logic circuit for prioritizing the commands from the control system for safety tasks, said logic circuit connected to said microprocessor; at least one output coupled to at least one of said microprocessor and said

logic circuit; an interface for connecting to one of the control system for operating tasks and a diagnostic device, said interface connected to said microprocessor; wherein the microprocessor and the logic circuit connected in parallel with respect to an incoming data stream. However, Eryurek teaches a microprocessor for processing commands from multiple controlling and diagnostic devices, said microprocessor coupled to said terminal (col. 3 lines 33-41, "Device 40 includes ... field device 40"); an interface for connecting to one of the control system for operating tasks and a diagnostic device (col. 4 lines 15-21, "The process ...I/O channel."), said interface connected to said microprocessor (fig. 2, element 52); and a memory for storing the commands and replies, said memory connected to said microprocessor (col. 4 lines 36-41, "Microprocessor 46 acts ... present invention"). Furthermore, Lang teaches a logic circuit for prioritizing the commands from the control system for safety tasks (col. 3 lines 19-22, "Prioritization ... component 3."), said logic circuit connected to said microprocessor (col. 3 lines 27-30, "Thus, where ... are utilized"); at least one output coupled to at least one of said microprocessor and said logic circuit (fig. 1, element 7a-n). In addition, Boyce teaches a microprocessor and a logic circuit connected in parallel with respect to an incoming data stream (Fig. 1, showed an input is feeding in parallel the microprocessor 10 and logic circuit 20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the microprocessor and diagnostic device of Eryurek with the controlling module of Harmon because it would provide for a centralized computing power in order to analyze the process signal and determining whether the operation status of a plant is normal or abnormal according to the calculated statistical parameters. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the logic circuit of

Lang with the controlling module of Harmon because it would provide for supplying the logic control signals in order to prioritize commands to activate the safety grade subsystem over the normal operating condition. In addition, it would have been obvious to one of ordinary skill in the art to incorporate the parallel configuration of Boyce with the prioritization logic circuit of Lang because it would provide for faster processing speed and more accurate determination in system failure detection.

Regarding claim 2

Eryurek discloses a clock circuit connecting to the microprocessor (col. 3 lines 33-35, "Device 40 ...to microprocessor 46").

Regarding claim 3

Lang teaches the logic circuit has a fixed-programmed priority function for the commands from the control system for safety tasks (col. 6 lines 11-30, "FIG. 5 ... isolate containment").

Regarding claim 4

Harmon teaches the module according to claim 1, including at least one electronic protection device protecting against a short circuit of and connected to said output (col. 11 lines 44-52, "To the extent ... enable/actuation logic").

Regarding claim 5

Harmon does not specifically teach the module according to claim 1, including coding plugs disposed on a side of the module which is accessible in an installed state. However, Harmon teaches a desk portion of the panel with all the interfaces to different control modules (col. 15 lines 42-55, "On the desk ... FIG. 6 and 7."). It would be obvious to one of ordinary skill in the

art to include coding plugs on the side of the desk portion of the panel for interfacing different device into the panel and provide better accessibility.

Regarding claim 6

Harmon teaches the module according to claim 1, wherein the drive is used in an installation that can endanger public safety (col. 9 lines 38-40, "It should be ... or subsystems.").

Regarding claim 7

Harmon teaches a control device for an installation, comprising: two manual control stations being separate from one another (col. 11 lines 64-67, "It can be ... defense-in-depth."; a control system for operating tasks (col. 11 line 68 to col. 12 line 1, "... separate control 114 for normal operation ..."); a control system for safety tasks (col. 12 line 1 "... and for safety and protection 118..."); and a module connected to each of said two manual control stations, said module including: a terminal connected to said control system for operating tasks and said control system for safety tasks (col. 11 line 64 to col. 12 line 3, "It can be ... workstation 104") but does not teach a microprocessor for processing commands from multiple controlling and diagnostic devices, said microprocessor coupled to said terminal; the commands from said control system for safety tasks having priority over commands from said control system for operating tasks; a logic circuit for prioritizing the commands from said control system for safety tasks, said logic circuit connected to said microprocessor; at least one output coupled to at least one of said microprocessor and said logic circuit; an interface connected to one of said control system for operating tasks and a diagnostic device, said interface connected to said microprocessor; and a memory for storing the commands and replies, said memory connected to said microprocessor, wherein the microprocessor and the logic circuit connected in parallel with respect to an

incoming data stream. However, Eryurek teaches a microprocessor for processing commands from multiple controlling and diagnostic devices, said microprocessor coupled to said terminal (col. 3 lines 33-41, "Device 40 includes ... field device 40"); an interface for connecting to one of the control system for operating tasks and a diagnostic device (col. 4 lines 15-21, "The process ...I/O channel."), said interface connected to said microprocessor (fig. 2, element 52); and a memory for storing the commands and replies, said memory connected to said microprocessor (col. 4 lines 36-41, "Microprocessor 46 acts ... present invention"). Furthermore, Lang teaches the commands for safety tasks having higher priority over commands for normal operation (col. 6 lines 11-13, "FIG. 5 ... over another"); a logic circuit for prioritizing the commands from the control system for safety tasks (col. 3 lines 19-22, "Prioritization ... component 3."), said logic circuit connected to said microprocessor (col. 3 lines 27-30, "Thus, where ... are utilized"); at least one output coupled to at least one of said microprocessor and said logic circuit (fig. 1, element 7a-n). In addition, Boyce teaches a microprocessor and a logic circuit connected in parallel with respect to an incoming data stream (Fig. 1, showed an input is feeding in parallel the microprocessor 10 and logic circuit 20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the microprocessor and diagnostic device of Eryurek with the controlling module of Harmon because it would provide for a centralized computing power in order to analyze the process signal and determining whether the operation status of a plant is normal or abnormal according to the calculated statistical parameters. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the logic circuit of Lang with the controlling module of Harmon because it would provide for supplying the logic control signals in order to prioritize

commands to activate the safety grade subsystem over the normal operating condition. In addition, it would have been obvious to one of ordinary skill in the art to incorporate the parallel configuration of Boyce with the prioritization logic circuit of Lang because it would provide for faster processing speed and more accurate determination in system failure detection.

Regarding claim 8

Harmon teaches a control method, which comprises: providing a control device having two manual control stations being separate from one another, and a module connected to each of the two manual control stations, the module containing: a terminal for connecting to a control system for operating tasks and a control system for safety tasks (col. 11 line 64 to col. 12 line 3, "It can be ... workstation 104"); indicating a state of the drive in both of the two manual control stations (col. 12 lines 32-46, "Thus, the control ... monitoring system.") but does not teach a microprocessor for processing commands from multiple controlling and diagnostic devices, said microprocessor coupled to said terminal; the commands from said control system for safety tasks having priority over commands from said control system for operating tasks; a logic circuit for prioritizing the commands from said control system for safety tasks, said logic circuit connected to said microprocessor, the logic circuit and the microprocessor connected in parallel with respect to an incoming data stream; at least one output coupled to at least one of said microprocessor and said logic circuit; an interface connected to one of said control system for operating tasks and a diagnostic device, said interface connected to said microprocessor; and a memory for storing the commands and replies, said memory connected to said microprocessor. However, Eryurek teaches a microprocessor for processing commands from multiple controlling and diagnostic devices, said microprocessor coupled to said terminal (col. 3 lines 33-41, "Device

40 includes ... field device 40"); an interface for connecting to one of the control system for operating tasks and a diagnostic device (col. 4 lines 15-21, "The process ...I/O channel."), said interface connected to said microprocessor (fig. 2, element 52); and a memory for storing the commands and replies, said memory connected to said microprocessor (col. 4 lines 36-41, "Microprocessor 46 acts ... present invention"). Furthermore, Lang teaches commands for safety tasks having higher priority over commands for normal operation (col. 6 lines 11-13, "FIG. 5 ... over another"); a logic circuit for prioritizing the commands from the control system for safety tasks (col. 3 lines 19-22, "Prioritization ... component 3."), said logic circuit connected to said microprocessor (col. 3 lines 27-30, "Thus, where ... are utilized"); at least one output coupled to at least one of said microprocessor and said logic circuit (fig. 1, element 7a-n). In addition, Boyce teaches a microprocessor and a logic circuit connected in parallel with respect to an incoming data stream (Fig. 1, showed an input is feeding in parallel the microprocessor 10 and logic circuit 20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the microprocessor and diagnostic device of Eryurek with the controlling module of Harmon because it would provide for a centralized computing power in order to analyze the process signal and determining whether the operation status of a plant is normal or abnormal according to the calculated statistical parameters. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the logic circuit of Lang with the controlling module of Harmon because it would provide for supplying the logic control signals in order to prioritize commands to activate the safety grade subsystem over the normal operating condition. In addition, it would have been obvious to one of ordinary skill in the art to incorporate the parallel configuration of Boyce with

the prioritization logic circuit of Lang because it would provide for faster processing speed and more accurate determination in system failure detection.

Regarding claim 9

Eryurek teaches a diagnostic signal that read out software requirement for operating the system (col. 2 lines 29-31, "A diagnostic signal ... process control loop").

Regarding claim 10

Eryruek teaches connecting the diagnostic device to a bus connected to the module (fig. 2, element 52).

Regarding claim 11

Eryruek teaches connecting the diagnostic device to the interface of the module (fig. 2, element 52).

Response to Arguments

In the remark the applicant argues that cited reference fails to disclose:

I) "the microprocessor and the logic circuit connected in parallel with respect to an incoming data stream" as to claims 1, 7 and 8.

In response to applicant's argument,

I) It is noted in prior art (Boyce et al. U.S. Patent 5,392,879) teaches (in Figure 1) the parallel connection of the logic circuit 20 and the microprocessor 10 with respect to an input data stream. Therefore, in combination with the other prior arts, it is clear that the configuration as claimed by the Applicant has been established. Thus, limitations are met by the reference.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (703) 305-7587 and fax number is (703) 746-8874. The examiner can normally be reached on Monday-Thursday and every other Friday from 7:30AM- 5:00PM EST or contact Supervisor, *Mr. Anil Khatri*, can be reached on *(703) 305-0282.*

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thomas Pham
Patent Examiner

TP

January 14, 2004

ANIL KHATRI
SUPERVISORY PATENT EXAMINER